

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
07.08.2002 Bulletin 2002/32

(51) Int Cl.7: **A61B 17/68**, A61N 1/20,
A61N 1/32, A61F 2/30

(43) Date of publication A2:
02.08.2000 Bulletin 2000/31

(21) Application number: 00300624.4

(22) Date of filing: 27.01.2000

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: 28.01.1999 US 239497

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(54) **Implanted bone stimulator and prosthesis system**

(57) An implanted piezoelectric module generates charge which may be applied to tissue or used to power or recharge an implanted device such as a pump or pacemaker. In a system for enhanced bone healing or anchoring of an implanted bone prosthesis such as a plate, stem, articulation component or other structural component, the piezoelectric element is coupled to receive mechanical strain from body activity and generates a charge which is applied to stimulate bone growth for anchoring the prosthesis. A metal mesh screen may apply the piezo-generated charge over a region of the bone surface to enhance growth of a thickening body at a desired region, for example at a region typically subject to stress shielding. The piezoelectric element may also be positioned in a region of tensile strain, with its cathodic pole extending to the desired growth gap or intended region of bone accretion. Oppositely poled elements may be positioned on opposing sides of a long bone or prosthesis so that the tensile and compressive stresses in opposed region produce charge of like polarity.

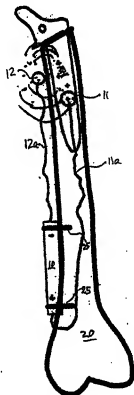


FIGURE 1



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Office

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Application Number
EP 00 30 0624

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Place of search THE HAGUE		Date of completion of the search 5 June 2002	Examiner Klein, C
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